



STATION DEFINITION,

**OR: HOW I LEARNED TO
STOP WORRYING AND LOVE
BAR DATA**

Motivation

- * Discussion focuses on the interaction of smog check stations
- * But this presupposes a definition of what constitutes a smog check station
- * Before we can analyze the effects of vehicle direction on station classifications, we need to examine our definition of a smog check station and the rigidity of station classification

Question

*How do we define a smog check station?

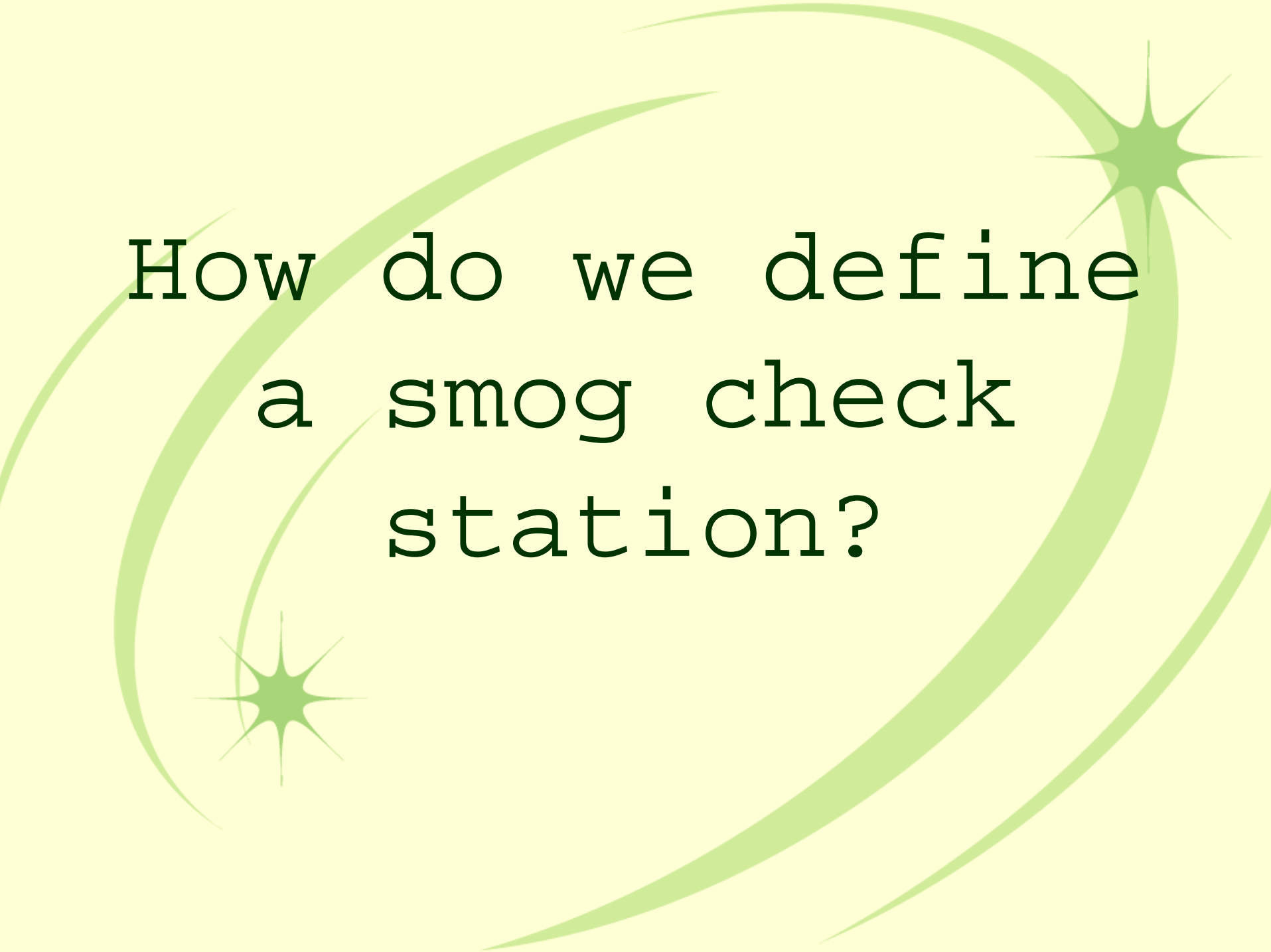
- By station number?
- By station name?
- By station location?
- By machine?
- By technician?
- By owner?

Assumptions

- * In our discussions, we tend to look only at the cross-section of smog check stations
- * We make the assumption that station location, owner, and classification are unchanging over time
- * But can stations adjust to a changing market? Can stations make changes in their business strategies?

Data

- * My goal is to obtain information on ALL smog check stations registered in California from June 1998 to May 2006
- * To that end, I have parceled together station information from BAR (thanks Rocky!), the BAR website, and the VID
- * Collected information includes station license number, station address, station name, station registration status, and station owner information



How do we define
a smog check
station?

Station Number Statistics

*There are at least 22,870
unique station license
numbers

- 19,684 Test and Repair

- 2,588 Test Only

Station Address

- * Addresses have been found for 10,208 station license numbers
- * Address information was NOT found for 12,662 license numbers
- * 6,329 of the known addresses are unique

Inspections Conducted by Location



Station Name

- *10,208 station license numbers are associated with a station name
- *7,311 of the station names are unique

So...

- * According to unique license number there are 22,870 smog check stations
- * According to unique location there are at least 6,329 smog check stations
- * According to unique name there are at least 7,311 smog check stations

Complications

- *Multiple license numbers have the same location
- *One location may have several station names or owners
- *There is no address information for 12,662 station license numbers

Examples from Fresno County

- *274 station license numbers have addresses in Fresno County
- *213 of these addresses are unique

61 Fresno County
addresses are associated
with multiple station
license numbers

736 Clovis Ave.	RL 224705	Spee Dee Oil
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736 Clovis Ave.	RJ 212857	Spee Dee Oil
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2440 Whitson	RA 219679	Avila Pit Stop
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2440 Whitson	RB 237991	Central Valley Smog
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* 9 station addresses in Fresno County switched classification out of 61 addresses with multiple license numbers

- 5 from Test and Repair to Test Only
- 4 from Test Only to Test and Repair

* In comparison 80 station addresses in Los Angeles County switched classification out of 770 locations with multiple license numbers

- 51 from Test and Repair to Test Only
- 29 from Test Only to Test and Repair

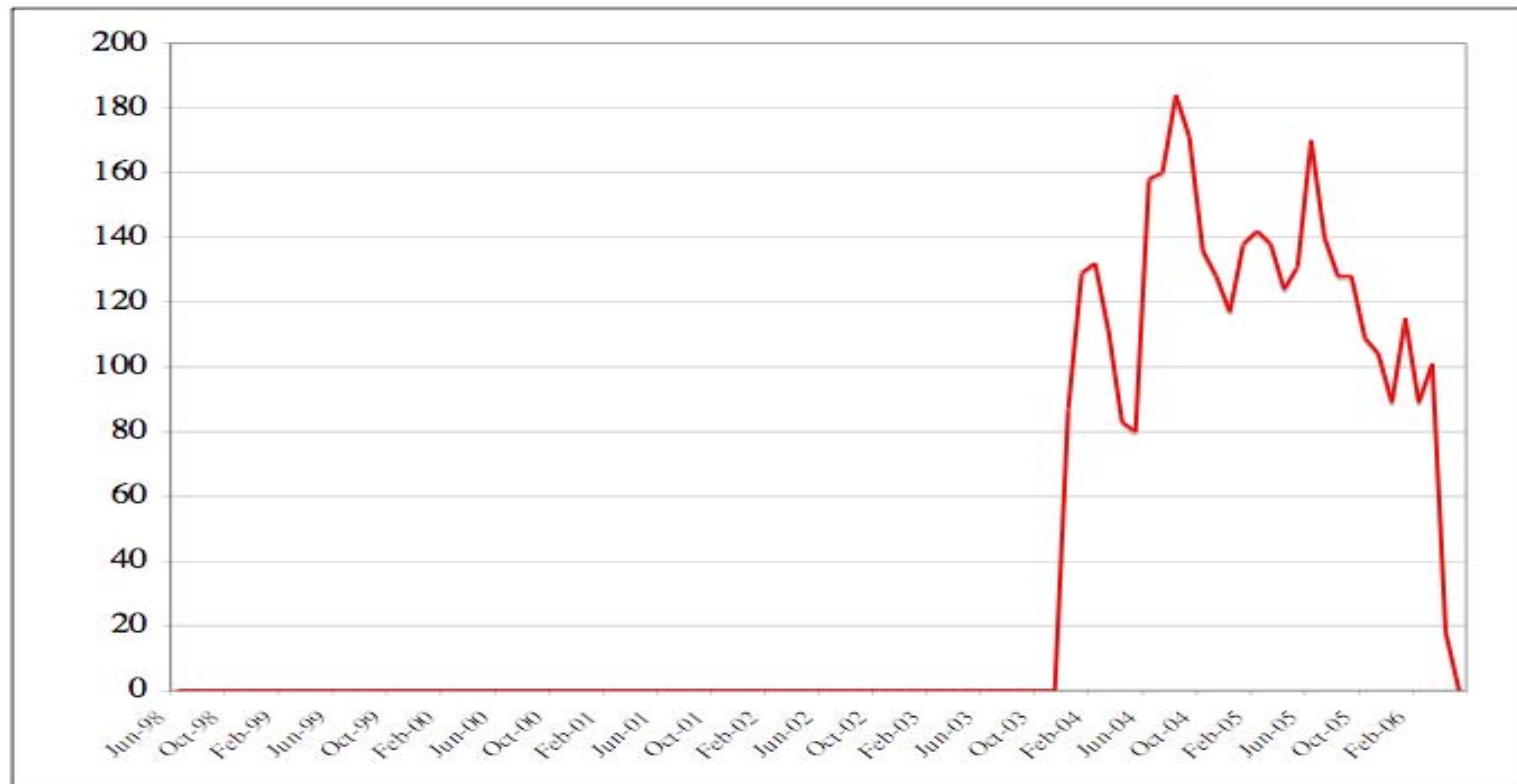
2597 N. Blackstone Ave.

Station No	Station Name	Station Status	
RG 147928	Payless Smog	Revoked	April 14 1995
RM 197632	Costless Smog	Revoked	Jan. 20 2000
TE 205377	Cost Less Smog	Citation Expired	Aug. 27 2002 May 31 2005
TB 237701	Costlow Smog	Expires	Feb. 28 2007

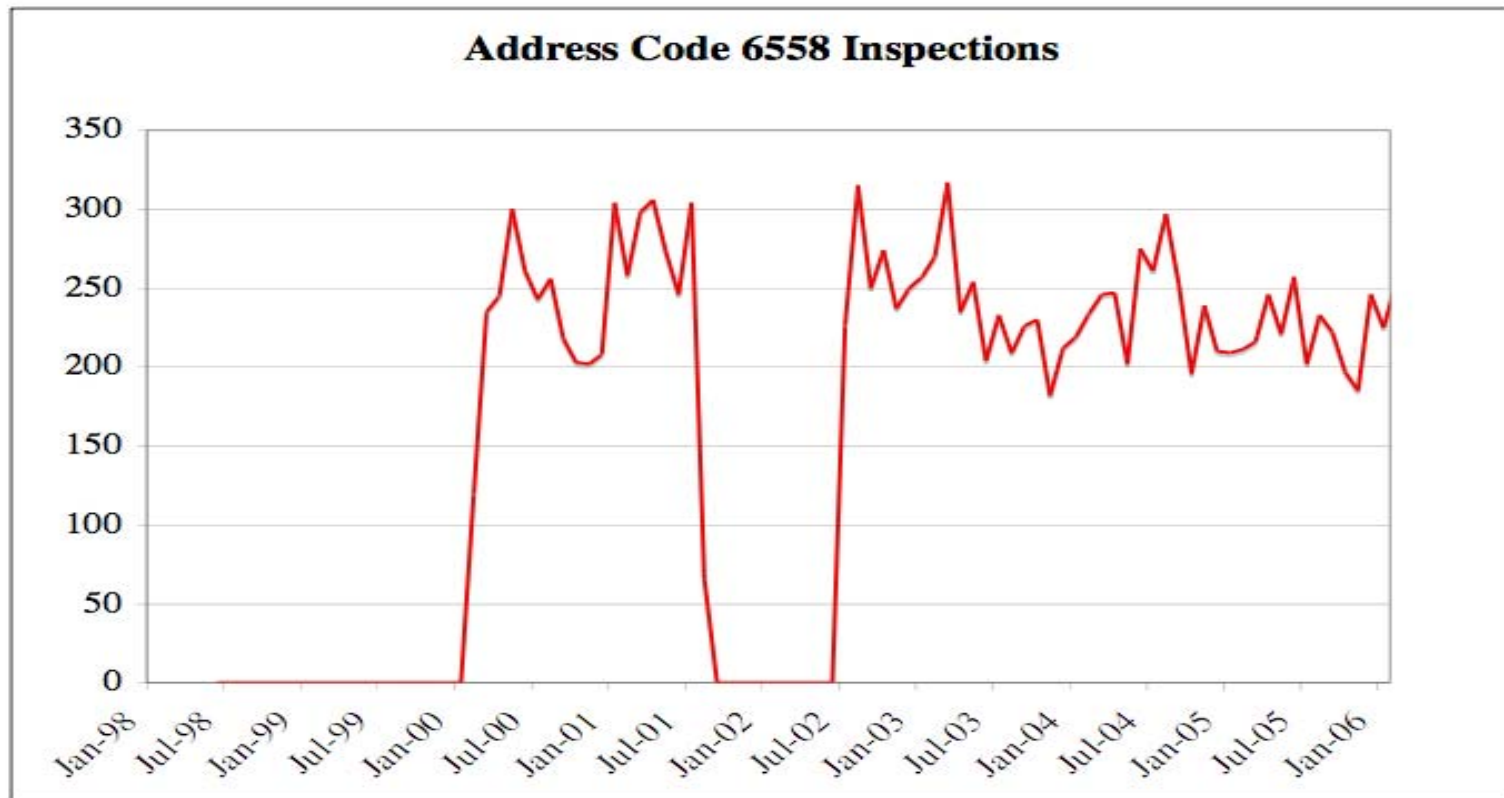
1785 West Shaw Avenue

Station No	Station Name	Station Status
RF 228193	P&B Gasoline	Cancelled Expired June 30 2005
RH 229309	Shaw Arco	Cancelled Expired Aug. 31 2005
TH 229309	Shaw Arco	Cancelled Expired Aug. 31 2006 Conducting smogs as of Sept 20

1785 West Shaw



An interesting time series



Missing Information?

Add. Code	Station No	Machine	Date of Test	VIN
6558	TK202127	WP391188	4/05/1999	JM1FB3319F0886421
	TK202127	WP391188	2/08/2000	JB3BA24K4GU033780
	TM208481	WP391188	2/11/2000	1P4GH54R7LX211099

No match found using BAR
website

License Search for Smog Check Station

CLICK HERE *for*
Search Instructions

Enter query criteria (omit apostrophes when entering a name)

Business Name:

Match any part of Name

☐

OR

License Number:

AND/OR

City:

County:

Records displayed each time?

Find

Clear

Back

Help

Search BAR website using VIN

Station Name / City	License	VIN	Make	Model	Year	Date / Time	Pass / Fail	Certificate
WITNESS SMOG / FRESNO	3RHS828	JB3BA24K4GU033780	DODGE	COLT	1986	03/10/2003 09:45 a.m.	P	EX868074C
BELMONT SMOG CENTER / FRESNO	3RHS828	JB3BA24K4GU033780	DODGE	COLT	1986	12/11/2002 12:20 p.m.	T	
GEORGES AUTO CARE & SMOG / FRESNO	3RHS828	JB3BA24K4GU033780	DODGE	COLT	1986	01/10/2001 12:13 p.m.	P	EB318926C
GEORGES AUTO CARE & SMOG / FRESNO	3RHS828	JB3BA24K4GU033780	DODGE	COLT	1986	01/10/2001 11:01 a.m.	F	
BUDGET SMOG CENTER / FRESNO	3RHS828	JB3BA24K4GU033780	DODGE	COLT	1986	02/10/2000 04:44 p.m.	P	DS170709C
BUDGET SMOG CENTER / FRESNO	3RHS828	JB3BA24K4GU033780	DODGE	COLT	1986	02/09/2000 12:18 p.m.	F	
WITNESS SMOG / FRESNO	3RHS828	JB3BA24K4GU033780	DODGE	COLT	1986	02/08/2000 08:44 a.m.	F	
CROWN SHELL / FRESNO	3RHS828	JB3BA24K4GU033780	DODGE	COLT	1986	01/24/2000 02:46 p.m.	F	
WITNESS SMOG / FRESNO	3RHS828	JB3BA24K4GU033780	DODGE	COLT	1986	01/24/2000 09:48 a.m.	F	
CROWN SHELL / FRESNO	3RHS828	JB3BA24K4GU033780	DODGE	COLT	1986	01/19/2000 04:27 p.m.	T	
GREWALS AUTOMOTIVE / KERMAN	3RHS828	JB3BA24K4GU033780	DODGE	COLT	1986	02/02/1998 12:13 p.m.	P	CJ427762C

Only one name match:
TM208481

BUREAU OF AUTOMOTIVE REPAIR

Licensee Name: WITNESS SMOG
License Type: Test Only Smog Station
License Number: TM208481
License Status: Valid [Definition](#)
Expiration Date: December 31, 2006
Address: 1835 N BLACKSTONE #104
City: FRESNO
State: CA
Zip: 93703-0000
County: FRESNO
Actions: Yes

Station Definition?

- * There is no clear measure of what constitutes a smog check station
- * We must look at station number, as well as station address, name, and owner in determining the number of unique stations
- * Further data and analysis are needed to expand the Fresno anecdotes state-wide

History is important

- * By now, Jeffrey Williams has convinced us that vehicle history is important
- * From this preliminary analysis, it is apparent that station history is just as important
 - Should we introduce a time series aspect to station classification?
 - How do we classify a station that changes classification but not owner, technician, machine, location, or name?

Conclusions

- * Even from this preliminary analysis, it is apparent that smog check stations are not static, but are able to make tremendous adjustments in station name, ownership, location, and type
- * The dynamic history of stations affects all analyses using smog check stations as a base of measure including failure rates by type of station and by classification
- * Before we analyze the interactions of Test Only and Test and Repair categories, we must first define smog check stations